

REMARKS

Claims 1-25 were originally filed in the present application.

Claims 1-25 were previously cancelled.

Claims 26-49 were previously added.

Claims 26-49 are pending in the present application.

Claims 26-49 were rejected in the November 1, 2005 Office Action.

No claims have been allowed.

Claims 26-49 remain in the present application.

Reconsideration of the claims is respectfully requested in light of the following argument.

In Sections 3-13 of the November 1, 2005 Office Action, the Examiner rejected Claims 26-49 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,222,220 to Mehta (hereafter “Mehta”) in view of “StackGuard: Automatic Adaptive Detection and Prevention of Buffer-Overflow Attacks” by Cowan, *et al.* (hereafter “Cowan”). The Applicant respectfully traverses the rejection of Claims 26-49.

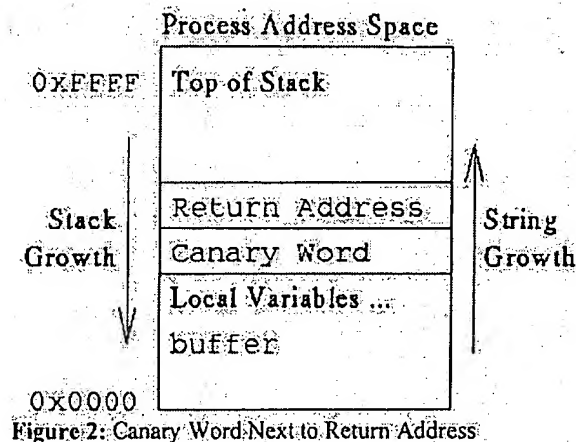
The Applicant directs the Examiner’s attention to Claim 26, which contains the following unique and novel limitations:

26. A method for detecting corruption associated with a stack in a storage device, the method comprising the steps of:
storing a first predetermined value in a first address location immediately preceding the starting location of the stack;
detecting the occurrence of a stack operation within the stack; and
comparing the value in the first address location to the first predetermined value to determine if the stack operation corrupted the first predetermined value stored in the first address location. (*Emphasis added*).

The Applicant respectfully asserts that the above-emphasized limitations are not disclosed, suggested, or even hinted at in the *Mehta* reference, the *Cowan* reference, or in the combination of the *Mehta* and *Cowan* references.

In rejecting Claim 26, the Examiner asserted that the *Cowan* reference discloses storing a first predetermined value in a first address location immediately preceding the starting location of the stack at Figure 2 and page 7, paragraphs 1 and 2. The Applicant respectfully submits that the Examiner has mischaracterized the teaching of the *Cowan* reference.

Figure 2 of the *Cowan* reference is reproduced below for the Examiner's convenience:



As may be seen from Figure 2, the *Cowan* reference describes a 16-bit Process Address Space encompassing addresses from 0x0000 to 0xFFFF. The stack of the *Cowan* reference begins at address 0xFFFF (Top of Stack) and grows into lower stack address locations. The *Cowan* reference describes "placing a 'canary' word next to the return address on the stack, as shown in Figure 2." *Cowan*, page 7, first paragraph.

As such, the *Cowan* reference teaches storing a predetermined value in a location adjacent to a return address within the stack, rather than storing a predetermined value in a first address location immediately preceding the starting location of the stack, as recited in Claim 26. Furthermore, the stack of the *Cowan* reference begins at the largest address that may be represented by a 16-bit binary address. In fact, the location immediately preceding the stack of the *Cowan* reference cannot be addressed—such a location does not exist.

The *Mehta* reference shares the same shortcomings as the *Cowan* reference. The *Mehta* reference describes a method for a microprocessor that includes, upon a subroutine or interrupt call, storing a return address to an additional register as well as to a stack memory. *See Mehta, Abstract*. At the end of execution of the subroutine or interrupt call, the return address in the stack memory is compared to the value stored in the additional register in order to determine whether the return address is corrupted. *See Mehta, Abstract*. Thus, the *Mehta* reference teaches comparing a value stored within the stack with a value stored in an additional register, rather than comparing a value in a first address location immediately preceding the starting location of the stack, as recited in Claim 26.

In sum, the unique and novel limitations recited in Claim 26 are not disclosed, suggested, or even hinted at in the *Mehta* reference, the *Cowan* reference, or in the combination of the *Mehta* and *Cowan* references. This being the case, Claim 26 presents patentable subject matter over the *Mehta* and *Cowan* references. Also, Claims 27-37 depend from Claim 26 and contain all of the unique and

novel limitations recited in Claim 26. Therefore, Claims 27-37 also are patentable over the *Mehta* and *Cowan* references.

The Applicant respectfully asserts that independent Claim 38 contains limitations that are analogous to the unique and novel limitations recited in Claim 26. This being the case, independent Claim 38 presents patentable subject matter over the *Mehta* and *Cowan* references. Finally, Claims 39-49, which depend from Claim 38, contain all of the unique and novel limitations recited in Claim 38. Therefore, Claims 39-49 also are patentable over the *Mehta* and *Cowan* references.

SUMMARY

For the reasons given above, the Applicant respectfully requests reconsideration and allowance of the pending claims and that this application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *jmockler@davismunck.com*.


The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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